# Choose the Best O/S

By Patrick Koehler 

In today's world of computing, you can select from a smorgasbord of operating systems such as IBM OS/2, Linux, Macintosh, Microsoft (MS), and Unix flavors. What *tastes* best to your PC will depend upon how much it can easily swallow. We will take a look at some of the essentials to determine what is best for you, such as how much memory is required, hard drive (HD) space needed and how long vendor support will continue. *How do we even get started?*

First let's take a look at one of the largest software vendors:

Microsoft's Lifecycle Policy for a business-oriented product defines three phases of support:

•*Mainstream* includes a pay-per-incident and free hot fix support for a minimum of five years.
•*Extended* includes an hourly rate and a fee for hot fix support for two years following the end of the mainstream phase. This support is offered only for Business and Development Software.
•*Online Self-Help* includes a searchable Knowledge Base, FAQs, etc., for a minimum of 8 years.

Windows 2000 exits the mainstream phase March 31, 2005. Extended support will continue to March 31, 2007 and self-help support will continue for at least another year.

Typically you would not use an operating system that is no longer supported by the manufacturer, so we will not consider Windows 95, 98/98SE because these operating systems are no longer supported by Microsoft. Support ended for Windows 95 and NT 3.5x on December 31, 2001; and Windows NT 4.xx extended support will stop on June 30, 2003. For a complete listing of product lifecycles, visit Microsoft's site at: http://support.microsoft.com.

The Navy Marine Corps Intranet (NMCI) identifies Windows 2000 as their O/S. There are four different flavors of 2000: Professional, Server, Advanced Server and Datacenter Server.

Windows Millennium (ME) will be supported until December 31, 2004. Windows ME requires a Pentium 150MHz or better, 32MB of RAM and a HD with 320MB of available space. ME is a good choice for multimedia computing.

Windows XP is designed for the novice user, but can be used by the expert. XP's strength lies in multimedia. Windows XP was designed to run on the latest PC equipment. Windows XP Home and Professional both require the same minimum hardware: Pentium 300MHz or faster system with 64MB of RAM, 1.5GB of free HD space, an SVGA or higher resolution video adapter, CD-ROM or DVD, and a keyboard and mouse. Since XP supports graphics, the more RAM, hard drive space and video memory you can afford the better. I think XP should be run on a 400MHz or faster system with 256MB of RAM. There are several significant differences between XP Home and Professional. XP Home cannot be a domain member, but can access domain resources. XP Home does not install a backup program by default, but one can be extracted from the O/S install CD. XP Home does not support group or local policies, while XP Pro provides full support for groups. XP Pro has better security than XP Home supporting Kerberos V5 authentication protocol and IP Security.

Below is a summary of MS operating systems, and minimum and suggested requirements.

Win 2000 Professional - 133MHz or higher Pentium, 64MB of RAM, 2GB HD with 650MB available space, CD-ROM or DVD drive, VGA or higher and keyboard. More RAM and hard drive space improves performance. Supports up to 2 CPUs and 4GB of memory. I suggest 400MHz or higher Pentium, 128MB of RAM, 8GB HD with 2GB available space, CD-R/RW, CD-ROM or DVD, SVGA or higher, mouse and keyboard.

Win 2000 Server - Same as Windows 2000 Pro, 128MB of RAM, 2GB HD with 1GB of available space. Same as 2000 Pro except it supports up to 4 CPUs. I suggest 400MHz or higher Pentium, 256MB of RAM, 10GB HD with 4GB available space.

Win 2000 Adv Server - Same as 2000 Server except it supports up to 8 CPUs and 8GB of memory. Has server failover and load balancing capabilities.

Win 2000 Datacenter Server - 8-way CPU capable using a Pentium III Xeon or higher, 256MB of RAM, 2GB HD with 1GB of available space. Same as 2000 Advanced Server except supports 8 to 32 CPUs and 32GB of memory so I recommend 512MB of RAM and a120GB HD with 20 percent available space.

The next step to consider is the level of your expertise. MS Windows provides a graphical user interface (GUI) that is easy to use and offers three different server versions and a client with multiple processor support. XP has an easy interface and keeps some things initially hidden from view that might confuse the novice user. For example, XP does not show everything in the Control Panel that is available. This is nice for the novice user because it doesn't present options that may cause confusion.

Security is another important factor to consider. Windows 2000 and XP can be made more secure by using New Technology File System (NTFS). NTFS extends security down to the file level. Windows 98/98SE's security consisted of a log on or password screen savers that could easily be circumvented by simply pressing the Escape key. Windows NT 4, 2000 and XP all have good security starting with requiring a user log on. There are other operating systems available that offer security and a GUI-based interface such as IBM OS/2, Linux and Unix. There are many flavors of Unix from AIX (IBM's version of Unix) to Santa Cruz Operations (SCO), Solaris, Sun, etc. Unix is designed for the expert user and suited for people who know how to program in the C language or write script files. Unix, just like Linux, is very flexible making detailed configurations possible.

Linux is a Unix flavor that is open source or freeware. If you want support there is a fee. There are numerous variations of Linux but providers such as Debian, Caldera, Mandrake, Redhat, SuSee, etc., all offer different interfaces. I will discuss the Redhat version because it is what I am most familiar with after working with the client and server versions 7.x through 9.x.

Redhat lets the user choose between the Gnome or KDE GUI when it is installed. I found that you can easily select either interface or you can select the command mode. Linux still lacks driver support and this is where Microsoft seems to excel. However, Redhat does provide an open packaging system, RPM Package Manager files that assist in the installation of devices with some devices

being recognized automatically. Redhat hardware requirements are: 200MHz Pentium or faster, 4.5GB of available disk space, 192MB of RAM for the graphical mode and separate partitions for its file system. If you purchase Redhat, it will include Basic Support.

OS/2 Warp is IBM's client/server system that will typically run on a RS6000 or Intel compatible PC. IBM is still working to make the OS/2 interface easier to use. OS/2 Warp 4 requires a minimum of a 486DX, 16MB of RAM and 10GB of available space, however, I suggest a system that is a 300MHz Pentium or faster with 128MB of RAM with 20GB of available space.

Macintosh's operating system is now Unix based with release X designed to run on the iMac™, eMac, Power Mac™ G4, Power Mac G4 Cube and PowerBook G3/G4 systems. It requires a minimum of 128MB of RAM, 4GB of available disk space, and it will only run on Apple and Macintosh systems. Macintosh systems can run Window applications with use of third party software products such as Virtual PC from Connectix.

Today's market includes a buffet of operating systems. If you are a novice user, then MS Windows or Macintosh would be the better choice. If you are an average user and desire greater flexibility with your O/S, then you could use an open source system such as Linux with a GUI interface or if you are running IBM equipment, you could use OS/2. If you are an expert user you could consider one of the many flavors of Linux and Unix. MS Windows 2000 and XP Pro both offer a wide assortment of features to delight an expert's appetite as well.

When you select your operating system know what you need according to hardware, cost, knowledge level and your project tasking. *Does your day-to-day work include only word processing tasks or are you testing C programs? Do you work with graphics? What are your future plans? Do you have to follow certain corporate or command policy standards for an operating system?*

Use the links below for more information:

www.apple.com
www.ibm.com
www.linux.com
www.microsoft.com
www.redhat.com
www.unix.com

If you have questions on the operating systems offered under our IT Umbrella Contracts, please go to our Web site at: www.it-umbrella.navy.mil.

*Patrick G. Koehler is a member of the SPAWAR Systems Center Charleston Technical Support & Acquisitions Branch. He has a bachelor's degree in Computer Information Systems, and holds certifications for A+, Network+, CCNA, MCP, MCSA, MCDBA and MCSE Windows 2000.*